

NOTES ON THE BIRDS PECULIAR TO LAYSAN
ISLAND, HAWAIIAN GROUP.¹

BY WALTER K. FISHER.

Plates XII-XVI.

WE DO not naturally associate land birds with tiny coral atolls in tropical seas. It is therefore a strange fact that such a diminutive island as Laysan, and one so remote from continental shores, should harbor no less than five peculiar species: the Laysan Finch (*Telespiza cantans*) and Honey-eater (*Himatione freethi*), both 'drepanidid' birds, the Miller Bird (*Acrocephalus familiaris*), the Laysan Rail (*Porzana palmeri*), and lastly the Laysan Teal (*Anas laysanensis*). I use the term 'land birds' loosely, in contradistinction to sea-fowl, multitudes of which breed here throughout the year. The presence of these species is all the more remarkable because none appear on neighboring islands, more or less distant, some of which are very similar to Laysan in structure and flora.

Reaching out toward Japan from the main Hawaiian group is a long chain of volcanic rocks, atolls, sand-bars, and sunken reefs, all insignificant in size and widely separated. The last islet is fully two thousand miles from Honolulu and about half-way to Yokohama. Beginning at the east, the more important members of this chain are: Bird Island and Necker (tall volcanic rocks), French Frigate Shoals, Gardner Rock, Laysan, Lisiansky, Midway, Cure, and Morell. Laysan is eight hundred miles northwest-by-west from Honolulu, and is perhaps best known as being the home of countless albatrosses.

We sighted the island early one morning in May, lying low on the horizon, with a great cloud of sea-birds hovering over it. On all sides the air was lively with terns, albatrosses, and boobies,

¹ These notes were made during a visit of the Fish Commission steamer 'Albatross' to Laysan, May 17 to 23, 1902, and are abridged from a more extended report on the avifauna of the island, to appear in the Bulletin of the U. S. Fish Commission.

and we began to gain some notion of what a pandemonium the distant swarm was raising. We landed on the west side, where there is a narrow passage through the breakers, which curl with beautiful hues on the coral reef, and then sweep shoreward with flying foam.

Mr. Max Schlemmer, the superintendent, his two assistants, and a couple of dozen Japanese laborers constitute the human population. The phosphate rock is very valuable for manufacturing fertilizer, and is worked assiduously during the summer months. To Mr. Schlemmer the expedition owed much, for his unflinching courtesy and substantial aid very materially promoted the success of our week's visit.

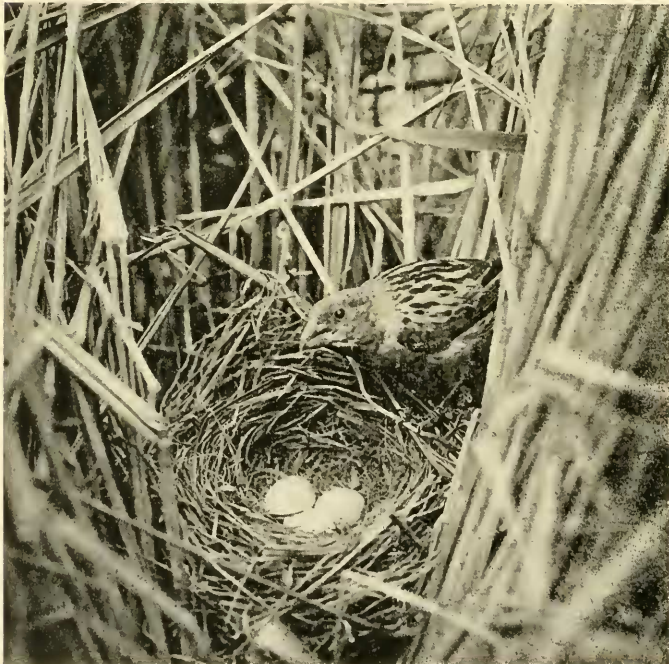
Laysan is a slightly elevated atoll, rudely quadrilateral in contour, and suggests a shallow basin or platter. It is three miles long by one and one half broad. In the center is a wholly enclosed lagoon, covering perhaps one hundred acres. This is surrounded by a broad, level plain, that part nearest the very saline waters of the lagoon being destitute of any vegetable life. From this plain the land rises as a gentle sandy slope to a low divide or rim (about twenty-five feet above the water) near the sea beach. Not a tree breaks the monotonous expanse, but instead are low bushes (*Chenopodium sandwicheum*, *Santalum freycinetianum*, *Scaevola kanihi*) and broad areas of high, tussocky grass. On the narrow seaward slope the turf is short and wiry, and a broad band between the bare shores of the lagoon and the beginning of the bush-grass is covered mostly with matted beds of succulent *Portulaca lutea*, and reddish-flowered *Sesuvium portulacastrum*. Beautiful morning-glories, yellow *Tribulus* (remining one of *Potentilla*), showy *Capparis*, and numerous other flowers add a bit of color to the landscape.

Laysan is a bird paradise. Albatrosses (*Diomedea immutabilis* and *D. nigripes*) by the thousands rear their young here each year, free from fear of molestation or injury. More numerous even are the Sooty Terns (*Sterna fuliginosa*), while the Gray-back Tern (*S. lunata*), White Tern (*Gygis alba kittlitzii*), Noio (*Micranous hawaiiensis*), and Noddy (*Anous stolidus*) are all abundant. Attractive and interesting birds are the boobies, of which two species, *Sula cyanops* and *Sula piscator* are on the

island in large numbers. The droll Frigate Bird (*Fregata aquila*) is here in all the glory of his bright red gular 'balloon,' and the splendid Red-tailed Tropic Bird (*Phaethon rubricaudus*) in satiny plumage of the palest rose pink, is a familiar member of the community; as he nervously flits by in the tropical sunshine his feathers glisten with the lustre of burnished metal. Among the Procellariidæ, the Bonin Petrels (*Æstrelata hypoleuca*) may be mentioned as exceeding even the Laysan Albatross in numbers, but as they live in deep burrows one would hardly think it. Next come the Wedge-tailed and Christmas Island Shearwaters (*Puffinus cuneatus* and *P. nativitatis*), which are abundant, and the rare Sooty Petrel (*Oceanodroma fuliginosa*) nests in some numbers during the winter months.

We were at once impressed by two striking facts: the great numbers of birds and their surprising tameness. Especially true is this of the sea-fowl. They seemed little put out by our presence and pursued their ordinary duties as if we were an essential part of the landscape. Even the land birds were fearless. While we sat working, not infrequently the little warbler, or Miller Bird, would perch on our table or chair backs, and the Laysan Rail and Finch would scurry about our feet in unobtrusive search for flies and bits of meat. Each day at meal-time the crimson Honey-eater flew into the room and hunted for millers. As we strolled over the island the Rails scampered hither and thither like tiny barnyard fowls, but soon returned, craning their necks to discover why they had so foolishly retreated. As for the sea-birds there was scarcely a species that seriously objected to our close approach, or at any rate departed when we attempted to photograph them. In fact the albatrosses were astonishingly fearless, and would sometimes walk up and examine some portion of our belongings, as if they had known us always.

It is far from my intention to speak of the sea-birds in detail but merely to sketch hastily, though perhaps inadequately, the conditions and creatures amid which the five peculiar land birds have presumably been evolved.



LAYSAN FINCH AND NEST.

LAYSAN FINCH. *Telespiza cantans* Wilson.

The Laysan 'Finch' is a stocky, independent creature about the size of a Black-headed Grosbeak, and its appearance strongly suggests one of the big-billed finches. The fully adult bird is a light rich yellow, greenish on the back, and a deep brownish on the wings and tail, the coverts and secondaries edged with yellowish, and this plumage is not assumed until the individual is over a year old, or perhaps not before the second season. The female is like the male but a trifle duller in tone. Both illustrations of Plate XII show the species in the subadult, brownish, streaked feathering, which it will be seen is worn through the first nesting season.

Telespiza and the next species considered, *Himatione freethi*, are placed in the Drepanididæ, a family peculiar to the Hawaiian Islands. The differences between these two birds seem great, and in fact about the only common character uniting the many diverse species into the composite family is the peculiar disagreeable musky scent said to emanate from birds in the flesh. I detected no such odor on either of the Laysan species, but it may have escaped me. The origin of the Drepanididæ remains still a sealed book, but their affinities seem to be American.

We much enjoyed the company of the Laysan Finch. He is a sociable, saucy and fearless fellow, and captivates one by his nonchalant, independent air. We could not walk anywhere without encountering them singly and in little companies—the latter being mostly males—diligently searching for food among the bushes or frolicking, toward the center of the island, in open stretches covered with portulaca and a pinkish flowered sesuvium. When disturbed they eye the intruder in an inquisitive, half-doubting manner, and utter their mellow, linnnet-like call. If pursued they do not fly far, but escape by running along the ground, or suddenly crouching under a grass tussock. Not infrequently they hopped about the piazza where we were preparing specimens, and sought for food beneath the chairs. One day when I was alone and quite still, a handsome male alighted on a table at my elbow and proceeded to explore a large heap of loose papers. He was soon lost in the rustling pile, which he demolished with great energy in his search for novelties.

Telespiza is not particular as to its food, but is fond of the soft parts of grass stems, tender shoots of bushes, seeds, and especially of sea-fowl eggs. I once frightened a tern off her 'nest,' and almost immediately a pair of Finches flew to the egg. One of them cracked a neat hole in the shell with a few strokes of its powerful beak, and began to feed, although I was hastily adjusting a camera only a yard or two away. Nor did the removal of some rocks which obscured the view bother them greatly, for they merely hopped a few feet away and watched me calmly, resuming their repast as soon as I had finished. (Plate XIII, Fig. 1.) But suddenly a Rail rushed out of the grass, and with feathers erect made for the Finches in such a determined manner that the pair flew away and left *Porzana* sole possessor. The latter lost no time in finishing the egg. (Plate XIII, Fig. 2.) Undoubtedly the finches eat a goodly number of eggs in the course of the season, for this was not the only case observed.

Their favorite nesting site is in the middle of a big tussock of grass, somewhat nearer the ground than *Himatione* and *Acrocephalus* usually build. *Chenopodium* bushes are also frequently used for we found nests here, as well as in grass clumps bordering the open near the lagoon — a location very popular with all the land birds. In each instance, in the latter case, the nest was wedged in the center of a tussock, well hidden by tall grass stems. It is constructed of handy materials, such as rootlets, twigs, and coarse grass, and the whole is rather loosely put together. The shallow cup, $2\frac{3}{4}$ inches in diameter, is lined with shredded grass. The position and character of the nest is shown in Plate XII.

There are three eggs in a complete set, although we found some nests with only two. A fairly typical specimen is bluntly ovate, of lustreless white, with small blotches and spots of light sepia and lilac gray, crowded toward the larger end, and very sparingly present on the acute half. Sometimes the spotting is distributed evenly over the whole surface. There is much variation in size and color. A typical example measures 24 by 18 millimeters.

The finches were so unsuspecting that I had little difficulty in securing photographs of them at the nest. The reader must remember that none of the various precautions usual in bird photography were here taken. The camera was within a few feet



FIG. 1. LAYSAN FINCH EATING TERN'S EGG.

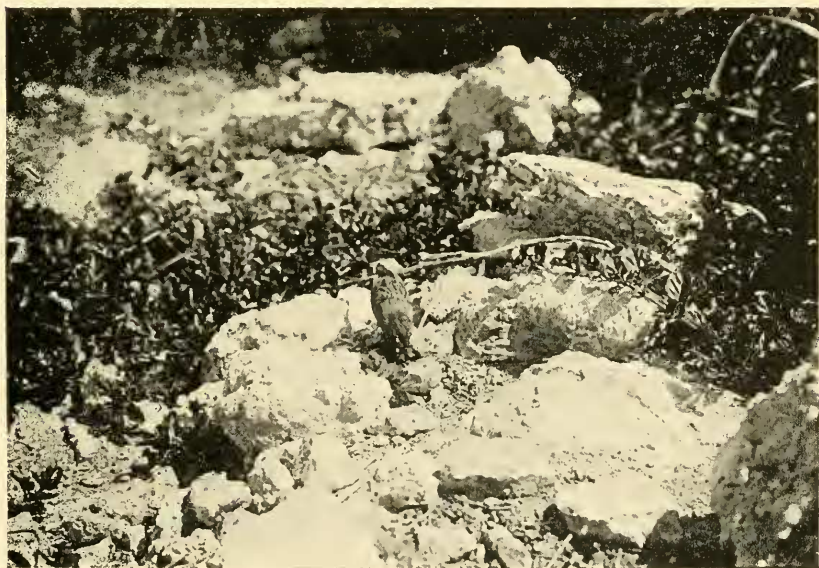


FIG. 2. LAYSAN RAIL EATING TERN'S EGG.

of the nest, in plain sight, and the operator was seated beside it waiting his chance. The bird in the pictures spent much of its time scratching sand, just behind the grass tussock, and would occasionally hop onto the edge of the nest to see what was happening.

LAYSAN HONEY-EATER. *Himatione freethi Rothschild.*

The Laysan Honey-eater is a brilliant little bird, about the size of a warbler, and very attractive when seen flitting here and there in the soft green of chenopodium bushes. Its plumage is of a lustrous scarlet vermilion, brightest on the crown, with wings, tail, and abdomen a dull sepia.

They are most abundant in the interior of the island near the open plain bordering the lagoon. Here on the extensive beds of succulent portulaca they may be seen throughout the day, busily walking about like pipits, either gathering insects or drinking honey from the numerous half-blown buds. The brush-like tongue of these creatures renders the gathering of honey, and such tiny insects as may infest the interior of corollas, an easy task. In fact it was no uncommon occurrence to see one go from flower to flower, and insert its bill between the petals of a nearly opened bud, with a certain precision and rapidity which suggested a hummingbird, except of course that the *Himatione* was on its feet.

I also observed them catching green caterpillars from *Chenopodium sandwicheum* bushes, the leaves of which resemble those of its well-known congener — our garden pig-weed. The Honey-eaters are partial to small brownish-gray moths or 'millers' which abound on the island. While we were at lunch, nearly every day a *Himatione* flew in and extracted these creatures from cracks between boards. It then grasped the miller with one foot, after the manner of a bird of prey, clinging with the other to the rough board wall, and ate the soft parts of its quarry. After a few moments the still fluttering victim was released, and the destructive search resumed. It became evident that the millers, relieved of important parts of their anatomy, did not thrive after such treatment. We heartily wished the little bird good luck, for the

millers left unpleasant memories, and likewise the imprint of their fuzz on many of my negatives.

The nest, like that of *Telespiza*, is built in grass tussocks, about two feet from the ground. The structure is loosely made, of fine grass and rootlets, and the dainty bowl is lined with rootlets and brown down from young Albatrosses (*Diomedea immutabilis*). There are no large white feathers in the lining, at once making the nest distinguishable from that of *Acrocephalus familiaris*, which builds in neighboring tussocks. The complete set seems to be four. The ovate egg is pure lustreless white, blotched and spotted at the large end with grayish vinaceous, and with fewer light and dark spots of Prout's brown. A typical specimen measures 18 by 13.75 millimeters.

Himatione freethi is closely related to the Apapane (*H. sanguinea*) of the larger Hawaiian Islands. The derivation of the two Laysan Drepanididæ is therefore rather plain, for although *Telespiza* is a monotypic genus, it belongs with the large-billed genera *Chloridops*, *Rhodacanthis*, and *Loxioides* of Hawaii, *Pseudonestor* of Maui, and *Psittacirostra* of Kauai, Oahu, Molokai, Lanai, and Hawaii.

MILLER BIRD. *Acrocephalus familiaris* (Rothschild).

The sociable little Miller Bird is one of the Reed Warblers belonging to the Sylviidæ, a characteristic Old World group, although a certain American genus, *Polioptila*, is also included in the family. It is curious that nowhere else in the whole Hawaiian group does any species of *Acrocephalus* occur. The genus is a wide ranging one, extending over the whole of the central and southern Palearctic Region, having also representatives in Australia and South Africa, while one division of the group is exclusively Polynesian. Many of the species are highly migratory, and winter in the tropical regions of Asia and Africa, and in the islands of the Malay Archipelago. But the subgenus *Tartare*, or genus as some consider it, to which the Laysan bird belongs, is a distinctly Polynesian group. It is distributed over the islands between 30° north latitude and 30° south, and between longitude

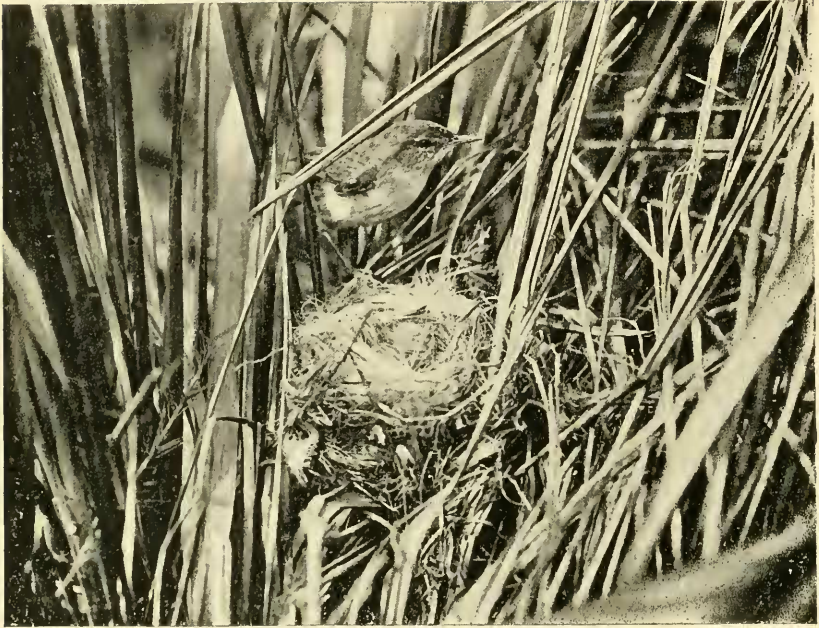


FIG. 1. ACROCEPHALUS FAMILIARIS AND NEST.



FIG. 2. NEST OF ACROCEPHALUS FAMILIARIS.

120° or 125° east and 120° or 125° west. Oustalet¹ considers that this restricted group, *Tartare*, which has only eight oceanic species shows perhaps closer affinities with *Berniera* of Madagascar, than with the European and Asiatic *Acrocephalus* (*l. c.* p. 210). *Tartare luscini* is found on Guam and Saipan, *T. syrinx* in the Carolines and on Pagan of the Mariana Islands, *T. rehsei* on Pleasant Island, *T. equinoctialis* on Christmas Island, *T. pistor* on the Fannings, *T. mendane* on the Marquesas, *T. longirostris* through the Society and Paumotu Archipelagos, and finally *T. familiaris* on Laysan. I am not aware with what species *familiaris* shows closest kin, but *à priori* one would rather favor the idea that the first colonists to Laysan came from the Carolines or the Ladrões (Mariana Islands) rather than from the south, for the reason that the genus is not present in the main Hawaiian group.

The Miller Bird is one of the most abundant of the species under consideration and is seen to best advantage during the cool of the morning or in late afternoon, for then it is very active, and at times musical. During the heated portion of the day, after the custom of our wood warblers, it retires to remain in seclusion among shady bushes, or tall tussocks of grass where its nest is made. Like most of the birds on the island *Acrocephalus* is rather unsuspecting, though not by any means so tame as either the Finches or Rails. I have read that its congeners in other parts of the world are quite shy, but many rules usual in bird manners seem here to be thrown aside. That the little creatures are far from nervous is demonstrated by the accompanying illustration (Plate XIV, Fig. 1). The camera was planted about thirty inches from the nest, and when everything was arranged I crouched under the instrument, and waited quietly for five minutes till the bird returned.

Whenever in evidence *Acrocephalus* always appears busy. It feeds largely on moths and other insects, and receives its local name from a fondness for millers, which, as already intimated, abound on the island. The little warbler drags these insects from their secluded hiding places with much skill. Its dull brownish-

¹M. E. Oustalet, *Les Mammifères et les Oiseaux des Isles Mariannes* Nouvelles Archives du Museum, 3rd series, VII, 1895, 212.